

SHORT SEGMENT FRACTURE DISTRACTION TO TREAT MALUNION OF TIBIA VIA ILIZAROV METHOD

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Introduction: Malunion of a bone is a complex and challenging deformity to be corrected. Acute correction by closed wedge osteotomy followed by internal fixation is a traditional treatment. However it has been associated with shortening of limb and non union. This is an inspiring case whereby the deformity is gradually corrected without shortening the limb by a short segment fracture distraction with Ilizarov external fixator (IEF).

Discussion: A 22 year old gentleman was presented with malunion of left tibia fibula three months post trauma. A varus angulation of 20 degrees over the distal third tibia was observed along with 3cm lower limb discrepancy. He underwent a corrective osteotomy and IEF over left tibia fibula with three weeks of gradual distraction. The second stage management; intramedullary nailing (ILN) of left tibia was done two weeks after removal of IEF. Three months post operative dynamization procedure was performed followed by aggressive physiotherapy. Fracture united well and he was able to return to work after 6 months post op.

Conclusion: The "law of tension stress" states that under the effect of slow and gradual distraction, bone, blood vessels, nerves and soft tissue would regenerate. The IEF is a stable circular external fixator which obeys the law. The success of this case was due to gradual distraction with IEF which avoided insult to the soft tissue and surrounding vasculature. In comparison with immediate fracture stabilisation which would have caused shortening of the limb. Definitive fracture stabilization with intramedullary nail over the tibia was done once adequate distraction had been achieved. In this case "patience is a virtue" and thus IEF is superior compared to the conventional method of treating malunion.